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ART UNIT	PAPER NUMBER
3623	

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Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 October 2003 and 05 March 2004*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
   closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 October 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
      application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date *10/10/03; 7/2204/*.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   The following is a First Office Action in response to the application filed 10 October 2003 and preliminary amendment filed on 05 March 2004. Claims 1-28 are pending in this application and have been examined on the merits as discussed below.

Drawings

2.   The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 610, 1130, 2740 and 3100.

3.   The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 1140 and 2760.

4.   The drawings are objected to because:

- Figure 5, reference character 560 is titled "Concept Extractor(s)", however the specification on page 8 refers to reference character 560 as -- Concept Scorer(s) --.

- Figure 27, reference character 2750 relates to the "no" answer, therefore will generate a <u>relaxing</u> modification predicted to bring number of candidates within range, however, the specification on page 39 indicates that reference character 2750 relates to the "yes" answer and a <u>constraining</u> modification predicted to bring the number of candidates within (or closer to) the range is generated.

- Figure 30 indicates "Candidate Name" and "Type" as column headers and a check box as a row indicator, however the actual names and types under the column headers do not align with the columns, which makes the actual names and type not match with the row indicators.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

5.   The disclosure is objected to because of the following informalities:

- On page 1, line 5, delete "U.S. Patent Application No. 10/648,272", and insert -- U.S. Patent Application No. *10/684,272* --.

- Starting page 5 to page 68, the applicant uses "Example 1 ... 55" for titles. The following paragraphs generally are not examples, therefore remove the term "Example 1 ... 55" and leave only the title of the section to be covered.

- On page 5, line 30, delete "analyzes structured the job candidate data" and insert -- analyzes *the structured* job candidate data --.

- On page 20, line 28, delete "the software can recognize that all there are alternative", and insert -- the software can recognize that all **three** are alternative --.

- On Page 31, line 11, delete "exemplaryimplementation" and insert – exemplary implementation --.

- On page 32, lines 26-27, it appears the phrase "For example, "Project & Product Manager" becomes "Product and Product Manager"." should be -- For example, "Project & Product Manager" becomes "*Project* and Product Manager". --.

- On page 38, line 10, delete "role-based modification to the query 2422" and insert -- role-based modification **2535** to the query 2422 --.

- On page 39, line 1, delete "2750" and insert -- *2740* --. Please refer to the drawing objection above.

- On page 39, line 3, delete "2760" and insert -- *2750* --. Please refer to the drawing objection above.

- On page 40, line 3, delete "and suggest that be changed to not required" and insert -- and suggest that *the identified component* be changed to not required --.

- On page 41, lines 15-16, delete "and selects concepts from to add to the job requisition" and insert -- and selects *from concepts* to add to the job requisition --.

- On page 45, line 9, delete "freshness value can matched" and insert -- freshness value can *be* matched --.

- On page 66, lines 25-26, delete "an exemplary graphical user interface depicting" and insert -- an exemplary graphical user interface *3100* depicting --. Please refer to the drawing objection above.

The above citation is a mere guide. Applicant is requested to review the specification thoroughly to eliminate additional errors. Appropriate correction is required.

Claim Objections

6.   **Claim 2** is objected to because of the following informalities: On page 69, line 13, delete "for performing method of claim 1" and insert -- for performing *the* method of claim 1 --. For purposes of examination, the Examiner is using the phrase as modified. Appropriate correction is required.

7.   **Claim 26** is objected to because of the following informalities: On page 73, line 28, delete "a desired number job candidates to return" and insert -- a desired number *of*

job candidates to return --. For purposes of examination, the Examiner is using the phrase as modified. Appropriate correction is required.

8.   **Claims 2** is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim, or amend the claim to place the claim in proper dependent form, or rewrite the claim in independent form. Claim 2 identifies one or more computer-readable media having computer-executable instructions for performing the method of claim 1. Simply having in ones possession a disk or CD that has computer-executable instructions for performing the method of claim 1 would be an infringement to claim 2 without infringing claim 1, since claim 1 identifies the method steps of refining the query in an attempt to return a number of candidates within a given range. The steps of claim 1 would not be infringed since the steps have not been executed. *Please See MPEP 608.01 (n), "Infringement Test" for dependent claims.* A proper dependent claim shall not conceivably be infringed by anything, which would not also infringe the basic claim.

9.   **Claims 27** is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim, or amend the claim to place the claim in proper dependent form, or rewrite the claim in independent form. Claim 27 identifies one or more computer-readable media comprising computer-executable instructions for performing the method of claim 26. Simply having in ones possession a disk or CD that has computer-executable instructions for performing the method of claim 26 would be an infringement to claim 27 without infringing claim 26, since claim 26 identifies the method

steps of processing a job requisition specifying desirable criteria for job candidates. The

steps of claim 26 would not be infringed since the steps have not been executed.

Please See MPEP. 608.01 (n), "Infringement Test" for dependent claims. A proper

dependent claim shall not conceivably be infringed by anything, which would not also

infringe the basic claim.

Claim Rejections - 35 USC § 112

10.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11.   **Claim 28** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite

for failing to particularly point out and distinctly claim the subject matter which applicant

regards as the invention. Claim 28 does not further limit the invention of claim 26 since

the limitation of iteratively repeating at least once and the limitation where the repeating

repeats a predetermined number of times stipulate a number of occurrences that are

the same.

Claim Rejections - 35 USC § 101

12.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1, 3-11, 17-23, 26 and 28 are rejected under 35 U.S.C. 101 because the

claimed invention is directed to non-statutory subject matter.

The basis of this rejection is set forth in a two-prong test of:

(1) whether the invention is within the technological arts; and

(2) whether the invention produces a useful, concrete, and tangible result.

For a claimed invention to be statutory, the claimed invention must be within the technological arts. Mere ideas in the abstract (i.e., abstract idea, law of nature, natural phenomena) that do not apply, involve, use, or advance the technological arts fail to promote the "progress of science and the useful arts" (i.e., the physical sciences as opposed to social sciences, for example) and therefore are found to be non-statutory subject matter. For the process claim to pass muster, the recited process must somehow apply, involve, use, or advance the technological arts. In the present case, **claims 1, 12, 17 and 26** only recite an abstract idea. As to **claim 1**, the recited steps of determining whether a number of job candidates matching a current query is outside the given range; and responsive to determining the number of job candidates is outside the given range, generating a proposed modification to the query predicted to bring the number candidates within or closer to the range does not apply, involve, use, or advance the technological arts since all of the recited steps can be performed in the mind of the user or by use of a pencil and paper. The method only constitutes an idea for refining the query in an attempt to return a number of candidates within a given range, therefore, is deemed to be directed to non-statutory subject matter. As to **claim 17**, the recited steps of extracting concepts from job candidate data of a desirable job candidate as desirable job candidate criteria; and submitting the desirable job candidate criteria for matching against other job candidates does not apply, involve,

use, or advance the technological arts since all of the recited steps can be performed in the mind of the user or by use of a pencil and paper. The method only constitutes an idea for identifying desirable job candidates, therefore, is deemed to be directed to non-statutory subject matter. As to **claim 26**, the recited steps of determining whether a number of job candidates matching the criteria is outside a desired range indicating a desired number job candidates to return; responsive to determining that the number the number of job candidates matching is outside the desired range, generating new criteria based on a software-generated proposed modification to the criteria; and iteratively repeating at least once does not apply, involve, use, or advance the technological arts since all of the recited steps can be performed in the mind of the user or by use of a pencil and paper. The method only constitutes an idea for processing a job requisition specifying desirable criteria for job candidates, therefore, is deemed to be directed to non-statutory subject matter.

As to technological arts recited in the preamble, mere recitation in the preamble (i.e., intended or field of use) or mere implications of employing a machine or article of manufacture to perform some or all of the recited steps does not confer statutory subject matter to an otherwise abstract idea unless there is positive recitation in the claim as a whole to breathe life and meaning into the preamble. In the present case, none of the recited steps are directed to anything in the technological arts as explained above. Looking at the claim as a whole, nothing in the body of the claim recites any structure or functionality to suggest that a computer performs the recited steps.

Additionally, for a claimed invention to be statutory, the claimed invention must produce a useful, concrete, and tangible result. In the present case, claim 1 produces a number of job candidates (i.e., repeatable) based on a current query specifying desired criteria for the job candidates (i.e., useful and tangible). Claim 17 identifies desirable job candidates (i.e., repeatable) by matching the desired job candidate criteria to the job candidate (i.e., useful and tangible). Claim 26 produces new criteria based on a proposed modification of the criteria (i.e., repeatable) by determining whether a number of job candidates matching the criteria are outside a desired range (i.e., useful and tangible).

Looking at the claims as a whole, nothing in the body of the claims recite any structure or functionality to suggest that a computer performs a task. While claim 18 recites an electronic representation of at least a portion of a resume of the desirable job candidate, this amounts to only stored information where nothing is done (i.e., computing) to breathe life into the invention. Claim 20 recites software components that independently analyze the job candidate data. Software or a computer program is merely a set of instructions capable of being executed on a computer, however without the computer-readable medium needed to realize the computer program's functionality, the software is merely considered functional descriptive material.

Although the recited processes produce a useful, concrete, and tangible result, since the claimed invention, as a whole, is not within the technological arts as explained above, the same rejection as stated above for claim 1, 17 and 26 applies to **claims 2-11, 18-23 and 28**.

13.   **Claims 13-16** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 13 recites a computer-readable medium having encoded thereon a data structure for specifying characteristics for a search against a collection of job candidates whose data has been conceptualized according to a conceptualization scheme, however, the data structure as claimed is merely a listing of elements where a physical or logical relationship among data elements does not exist. To be statutory, a claimed computer-readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components, which permit the data structure's functionality to be realized.

Claims 24-25 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 24-25 recites a plurality of subsystems for extracting extracted characteristics from the desirable job candidate data and a query submitter for submitting the extracted characteristics for matching against a plurality of job candidates via a match engine. The subsystems comprise one or more of an industry cloner, a company cloner, a skill cloner, a role cloner, and an education cloner. The software-based system for finding job candidates having characteristics similar to desirable job candidate associated with a job candidate designated as desirable does not identify the physical structure of the machine or manufacture in terms of its hardware or hardware and software combination, therefore, is considered a non-statutory product.

Claim Rejections - 35 USC § 102

14.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

15.   **Claims 1-12 and 24-28** are rejected under 35 U.S.C. 102(b) as being anticipated

by Puram et al. (U.S. Patent 6,289,340). Puram et al. disclose matching job candidate

information comprising:

- **[Claim 1]** determining whether a number of job candidates matching a current query is outside the given range (Abstract, Figure 4, and col. 7, lines 21-47, Puram et al. teach selecting candidates from a pool of candidates to fill a position based on the skills held by the candidate. The search will only return those candidates whose skills profiles match or exceeds specified criteria. The search for a sub-pool may generate too many or too few candidates. The Examiner interprets that an upper and lower number is established in order for the system to measure and determine too many or too few.); and

- responsive to determining the number of job candidates is outside the given range, generating a proposed modification to the query predicted to bring the number candidates within or closer to the range (col. 7, lines 21-47, Puram et al. teach a feedback process counts the number of candidates in the sub-pool and allows for modifications to yield a smaller or larger sub-pool.).

- **[Claim 3]** generating a new query incorporating the proposed modification (col. 7, lines 21-47, Puram et al. teach that after an employer has entered their needs data, the system searches the candidate records and counts the number of candidates who have the skill and skill levels to fit the needs profile. If the number is too small the system conduct the search again based on the self-assessed skill levels. If the number in this sub-pool is still relatively large, the employer is given the option to modify the needs profile such that it is likely to yield a smaller sub-pool. For example, the employer may raise the level of skill required for a skill, add skills to the list, and/or

raise the level of importance of a skill. Conversely, if the sub-pool is relatively small, the employer can adjust the needs profile to yield a larger sub-pool.).

- **[Claim 4]** generating search results via the new query (col. 7, lines 21-51, Puram et al. teach that after an employer has entered their needs data, the system searches the candidate records and counts the number of candidates who have the skill and skill levels to fit the needs profile. If the number is too small the system conduct the search again based on the self-assessed skill levels. If the number in this sub-pool is still relatively large, the employer is given the option to modify the needs profile such that it is likely to yield a smaller sub-pool. For example, the employer may raise the level of skill required for a skill, add skills to the list, and/or raise the level of importance of a skill. Conversely, if the sub-pool is relatively small, the employer can adjust the needs profile to yield a larger sub-pool. Once a sub-pool of satisfactory size is identified, the next task is to determine which of the adequate candidates has skills and experience that most closely match what is needed or desired of the position.).

- **[Claim 5]** generating the proposed modification comprises consulting a plurality of sub-systems in a defined order (col. 7, lines 4-20, Puram et al. teach a preferred method of finding this sub-pool involves searching all candidate records to find those that possess some threshold level of experience in the "core strengths" (i.e., those skills that are of the highest priority) for a position. Preferable this step of establishing the sub-pool also involves comparison of the candidate's preference data to the position data, and comparison of the company's global hiring rules or preferences to weed out any candidates that are not available, would not be interested in the position and/or do not meet the company's general hiring criteria. The Examiner interprets the process of searching involves different datasets that are searched in a defined order.).

- **[Claim 6]** identifying a component of the query having a fully open range; and generating a proposed modification indicating that the fully open range be constrained (col. 7, lines 21-51, Puram et al. teach that after an employer has entered their needs data, the system searches the candidate records and counts the number of candidates who have the skill and skill levels to fit the needs profile. If the number in this sub-pool is still relatively large, the employer is given the option to modify the needs profile such that it is likely to yield a smaller sub-pool. For example, the employer may raise the level of skill required for a skill, add skills to the list, and/or raise the level of importance of a skill.).

- **[Claim 7]** ranking skills appearing within job candidates according to a ranking scheme; and choosing a highly-ranked skill as the component of the criteria (col. 5, lines 60-65, Puram et al. teach employers seeking to fill positions are entering data regarding the needs of the position. First, and employer identifies or selects skills that are desired for the position and then assigns to each selected skill a skill level or experience desired and the importance or priority of that skill.).

- **[Claim 8]** identifying a component of the query having a narrowed range; and generating a proposed modification indicating that the component having a narrowed range be relaxed (col. 7, lines 21-51, Puram et al. teach that after an employer has entered their needs data, the system searches the candidate records and counts the number of candidates who have the skill and skill levels to fit the needs profile. If the number is too small the system conduct the search again based on the self-assessed skill levels. Conversely, if the sub-pool is relatively small, the employer can adjust the needs profile to yield a larger sub-pool.).

- **[Claim 9]** identifying a component not appearing in the query as required, wherein the component is associated with at least a certain percentage of job candidates matching the current query; and generating a proposed modification indicating that the component not appearing in the query as required be included in the query as required (col. 7, lines 21-51, Puram et al. teach that after an employer has entered their needs data, the system searches the candidate records and counts the number of candidates who have the skill and skill levels to fit the needs profile. If the number is too small the system conduct the search again based on the self-assessed skill levels. If the number in this sub-pool is still relatively large, the employer is given the option to modify the needs profile such that it is likely to yield a smaller sub-pool. For example, the employer may raise the level of skill required for a skill, add skills to the list, and/or raise the level of importance of a skill. Conversely, if the sub-pool is relatively small, the employer can adjust the needs profile to yield a larger sub-pool. The Examiner interprets the process of adding skills to the list as identifying a component not appearing in the query and indicating that the component be included in the query.).

- **[Claim 10]** identifying a component appearing in the query as required, wherein the component is associated with a fewest number of job candidates matching the current query; and generating a proposed modification indicating that the component appearing in the query as required not be included in the query as required (col. 7, lines 21-51, Puram et al. teach that if the sub-pool is relatively small, the employer can adjust the needs profile to yield a larger sub-pool.).

- **[Claim 11]** generating the proposed modification comprises: identifying a set of skills associated with a primary rote of a job requisition associated with the query (col. 5, lines 60-65, Puram et al. teach employers seeking to fill positions are entering data regarding the needs of the position. First, and employer identifies or selects skills that are desired for the position.);

- ranking the skills in the set (col. 5, lines 60-65, Puram et al. teach employer identifies or selects skills that are desired for the position and then assigns to each selected skill a skill level or experience desired and the importance or priority of that skill.); and

- generating a proposed modification indicating that a highest-ranked skill in the set not appearing in the query be added to the query (col. 7, lines 21-51, Puram et al. teach that after an employer has entered their needs data, the system searches the candidate records and counts the number of candidates who have the skill and skill levels to fit the needs profile. If the number is too small the system conduct the search again based on the self-assessed skill levels. If the number in this sub-pool is still relatively large, the employer is given the option to modify the needs profile such that it is likely to yield a smaller sub-pool. For example, the employer may raise the level of skill required for a skill, add skills to the list, and/or raise the level of importance of a skill.).

- **[Claim 26]** determining whether a number of job candidates matching the criteria is outside a desired range indicating a desired number job candidates to return (Abstract, Figure 4, and col. 7, lines 21-47, Puram et al. teach selecting candidates from a pool of candidates to fill a position based on the skills held by the candidate. The search will only return those candidates whose skills profiles match or exceeds specified criteria. The search for a sub-pool may generate too many or too few candidates. The Examiner interprets that an upper and lower number is established in order for the system to measure and determine too many or too few.);

- responsive to determining that the number the number of job candidates matching is outside the desired range, generating new criteria based on a software-generated proposed modification to the criteria (col. 7, lines 21-47, Puram et al. teach a feedback process counts the number of candidates in the sub-pool and allows for modifications to yield a smaller or larger sub-pool.); and

- iteratively repeating at least once (col. 7, lines 21-51, Puram et al. teach that after an employer has entered their needs data, the system searches the candidate records and counts the number of candidates who have the skill

and skill levels to fit the needs profile. If the number is too small the system conduct the search again based on the self-assessed skill levels. If the number in this sub-pool is still relatively large, the employer is given the option to modify the needs profile such that it is likely to yield a smaller sub-pool. For example, the employer may raise the level of skill required for a skill, add skills to the list, and/or raise the level of importance of a skill. Conversely, if the sub-pool is relatively small, the employer can adjust the needs profile to yield a larger sub-pool. Once a sub-pool of satisfactory size is identified, the next task is to determine which of the adequate candidates has skills and experience that most closely match what is needed or desired of the position. The Examiner interprets the process is repeated at least once.).

- **[Claim 28]** the repeating repeats a predetermined number of times (col. 7, lines 21-51, Puram et al. teach that after an employer has entered their needs data, the system searches the candidate records and counts the number of candidates who have the skill and skill levels to fit the needs profile. If the number is too small the system conduct the search again based on the self-assessed skill levels. If the number in this sub-pool is still relatively large, the employer is given the option to modify the needs profile such that it is likely to yield a smaller sub-pool. For example, the employer may raise the level of skill required for a skill, add skills to the list, and/or raise the level of importance of a skill. Conversely, if the sub-pool is relatively small, the employer can adjust the needs profile to yield a larger sub-pool. Once a sub-pool of satisfactory size is identified, the next task is to determine which of the adequate candidates has skills and experience that most closely match what is needed or desired of the position. The Examiner interprets the process is repeated at least once.).

Claims 2, 12, 24-25 and 27 substantially recites the same limitations as that of claims 1 and 26 with the distinction of the recited method being a computer-readable medium, a software-based system and system. Puram et al. teach an apparatus, system, and method to use relational databases or database files to store, sort, search, and otherwise "mine" stored data. Once an employer has entered their needs data, the system searches the candidate records and counts the number of candidates who have the skill and skill levels to fit the needs profile (col. 2, lines 36-43, and col. 7, lines

21-51). Hence the same rejection for claims 1 and 26 as applied above applies to

claims 2, 12, 24-25 and 27.

16.   **Claim 17, 18 and 20** are rejected under 35 U.S.C. 102(b) as being anticipated by

Schweyer et al. (Schweyer et al., Engenium – Concept Based Resume Searching,

September 2002 [GOOGLE]).   Schweyer et al. disclose matching job candidate

information comprising:

- **[Claim 17]** extracting concepts from job candidate data of a desirable job
  candidate as desirable job candidate criteria (Para 9 and 10, Schweyer et al.
  teach Engenium is designed to provide the accuracy of field searching with
  the power and convenience of concept searching. You can require a limited
  number of fields in HireReasoning and allow the applicant to cut and past the
  rest of their resume. HireReasoning will accept the fielded information and
  perform a concept search on the rest. Combine HireReasoning with spidering
  and extraction tools and you can mine resumes from the web, extract them
  into the fields you deem necessary and deposit the rest in whatever structure
  you wish.); and

- submitting the desirable job candidate criteria for matching against other job
  candidates (Para 27 and 33, Schweyer et al. teach that Engenium is an
  innovative software company that allows companies to harness knowledge in
  ways never before possible through its next-generation conceptual matching
  technology, Semetric™. In addition to unearthing the best potential matches
  for a job, Semetric™ takes the process further by ranking the search results
  from the most pertinent matches to the least applicable.).

- **[Claim 18]** the job candidate data comprises an electronic representation of
  at least a portion of a resume of the desirable job candidate (Para 9,
  Schweyer et al. teach Engenium is designed to provide the accuracy of field
  searching with the power and convenience of concept searching. You can
  require a limited number of fields in HireReasoning and allow the applicant to
  cut and past the rest of their resume. HireReasoning will accept the fielded
  information and perform a concept search on the rest.).

- **[Claim 20]** the extracting comprises: accepting criteria for a plurality of
  criteria-determining software components, wherein the criteria-determining
  software components independently analyze the job candidate data (Para

31, Schweyer et al. teach concept searching means we are able to take an entire resume and an entire job description and compare the two bodies of text in their entirety).

Claim Rejections - 35 USC § 103

17.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

18.   **Claim 19** is rejected under 35 U.S.C. 103(a) as being unpatentable over Schweyer et al. (Schweyer et al., Engenium – Concept Based Resume Searching, September 2002 [GOOGLE]) in view of Russell et al. (U.S. Patent 6,598,047). Schweyer et al. disclose matching job candidate information but fail to teach the matching comprises conducting a search in an n-dimensional concept space. Russell et al. teach to initiate a search for all documents containing a given concept, the user enters the word or phrase into the search interface. The search term is also processed and results in a conceptual point in the n-dimensional concept space. The conceptual space represents all existing documents. The n-dimensional conceptual distance between the search point and all other points is compared to an arbitrary distance metric. All the documents that fall within this space are returned as an unordered list of documents. The unordered list is then fed to the neural network, which results in an ordering of the list (col. 3, lines 42-56). It would have been obvious to one of ordinary skill in the art to incorporate the n-dimensional concept space

search of Russell et al. with Schweyer et al. since Schweyer et al. teach concept

searching (Para 9). In today's environment, when companies identify a need, that need

is required now since the window of time to capture market share is so narrow.

Expediting the location of the company's need and getting it onboard is obviously a

priority of whatever department is responsible for that need. Human resource needs

are also critical especially in the high technology arena. With Semetric™ technology,

Recruitmax has realized faster searching through its client's databases. Naturally, there

is an important human element involved in hiring decisions, but this expedites the

process significantly, bringing it to that final stage quicker than ever before (Schweyer et

al.: Para 31 and 33). Being able to accurately screen resumes of potential candidates

in an expeditious manner allows the human resource need to be identified and brought

on board so the window of time to capture market share can be realized.

19.   **Claims 21 and 23** are rejected under 35 U.S.C. 103(a) as being unpatentable

over Schweyer et al. (Schweyer et al., Engenium – Concept Based Resume Searching,

September 2002 [GOOGLE]) in view of Puram et al. (U.S. Patent 6,289,340).

Schweyer et al. disclose matching job candidate information but fail to teach a

component for identifying a most recent role from the job candidate data for inclusion

in the criteria; a component for identifying highest-ranked skill concepts from the job

candidate data for inclusion in the criteria. Puram et al. teach the candidate enters the

data illustrated in the "Technical Skill Evaluation" table. The technical skill table further

included a column for the number of years the candidate has been developing the

specific skills or using the specified tool. An auxiliary table shows a pre-defined list of roles for the candidate to choose from (Figure 5-11b, col.3 line 59 to col. 4, line 53). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to include the technical skill assessment of Puram et al. with the teachings of Schweyer et al. since Schweyer et al. teach unearthing the best potential matched for a job (Para 33). Finding the right person for the job is paramount to getting the job done. As applied to the recruiting process, concept searching means we are able to take an entire resume and an entire job description and compare the two bodies of text in their entirety. Searching with Semetric™ allows clients to find highly qualified candidates that might have otherwise "slipped under the radar" (Para 31-32). Puram et al. teach selecting a candidate form a pool of candidates to fill a position based on the skills held by the candidate, the skills desired for the position and the priority of the skill for the position (Abstract). Therefore, searching for the right person with the right qualifications and skills to perform the job will ensure the job will get done.

- **[Claim 23]** before matching job candidates via the desirable job candidate criteria, removing one or more of the desirable job candidate criteria based on a prioritization of the criteria (Puram et al.: col. 5, lines 60-65, Puram et al. teach employer identifies or selects skills that are desired for the position and then assigns to each selected skill a skill level or experience desired and the importance or priority of that skill. The Examiner interprets that prioritizing the skill requirements will remove one or more criteria.)

20.   Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schweyer et al. (Schweyer et al., Engenium – Concept Based Resume Searching, September 2002 [GOOGLE]) and Puram et al. (U.S. Patent 6,289,340) in view of claim

17.   Schweyer et al. and Puram et al. disclose matching job candidate information but fail to teach a component for identifying one or more companies associated with a most recent experience in the job candidate data for inclusion in the criteria; a component for identifying one or more industries associated with a most recent experience in the job candidate data for inclusion in the criteria; and a component for identifying a highest education level in the job candidate data for inclusion in the criteria.   The Examiner takes Official Notice that it is old and well known in the recruiting art to ascertain the companies the candidate worked for to help further identify the particular industry the candidate worked in. It is also old and well known in the recruiting art to ascertain the candidate's educational background to include degrees held and from what schools. Recruiters look for candidates that match a certain requirement such as experience and educational background, therefore, ascertaining the most recent experience in a specific industry couple with the degree status of the candidate will narrow the number of qualified candidates with the experience and education requirements to perform the job at hand.

21.   **Claims 13-16** substantially recites the same limitations as that of claims 21-23 with the distinction of the recited method being a data structure. Hence the same rejection for claims 21-23 as applied above applies to claims 13-16.

Conclusion

22.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Clark et al. (U.S. Patent 5,164,897) disclose an automated method for selecting personnel matched to job criteria.

- Li et al. (U.S. Patent 5,608,899) disclose a method and apparatus for searching a database by interactively modifying a database query.

- Durand et al. (U.S. Patent 6,272,467) disclose a system for data collection and matching compatible profiles.

- Stoffel et al. (U.S. Patent 6,094,650) disclose a database analysis using a probabilistic ontology.

- Grefenstette et al. (U.S. Patent 6,778,979) disclose a system for automatically generating queries.

- Sommer et al. (U.S. Patent 6,847,966) disclose a method and system for optimally searching a document database using a representative semantic space.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Heck whose telephone number is (703) 305-8215. The examiner can normally be reached Monday thru Friday between the hours of 8:00am - 4:30pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq R. Hafiz can be reached on (703) 305-9643. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

Any response to this action should be mailed to:

Director of the United States Patent and Trademark Office
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Or faxed to:

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                          communications labeled "**Box AF**"]

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                          "**DRAFT**"]

Hand delivered responses should be brought to 220 South 20th Street, Crystal Plaza Two, Lobby, Room 1B03, Arlington, Virginia 22202.

mch
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